

What is claimed is:

1. A pharmaceutical or veterinary paste formulation comprising:

- (a) an effective amount of a therapeutic agent;  
(b) fumed silica;  
(c) a viscosity modifier;  
(d) a carrier;  
(e) optionally, an absorbent; and  
(f) optionally, a colorant, stabilizer, surfactant, or preservative.

2. The paste according to claim 1, which comprises:

- (a) a therapeutic agent selected from the group consisting of insecticides, acaricides, parasiticides, antibiotics, growth enhancers, or oil-soluble NSAIDS;  
(b) fumed silica;  
(c) a viscosity modifier;  
(d) an absorbent;  
(e) a colorant; and  
(f) a carrier which is triacetin, a monoglyceride, a diglyceride, or a triglyceride.

a 3. The paste formulation according to claim <sup>2</sup>/~~3~~, wherein the viscosity modifier is PEG 200, PEG 300, PEG 400, PEG 600, monoethanolamine, triethanolamine, glycerol, propylene glycol, polyoxylene sorbitan monoleate, or poloxamers; the absorbent is magnesium carbonate, calcium carbonate, starch, or cellulose and its derivatives; and the colorant is titanium dioxide, dye or lake.

4. The paste formulation according to claim 1, comprising:

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(a) a therapeutic agent selected from the group consisting of avermectins, milbemycins, nordulisporic acid and its derivatives, estrogens, progestins, androgens, substituted pyridyl methyl derivatives, phenylpyrazoles, COX-2 inhibitors or a proton pump inhibitor.

(b) fumed silica;

(c) a viscosity modifier;

(d) an absorbent;

(e) a colorant; and

(f) a carrier which is triacetin, a monoglyceride, a diglyceride, or a triglyceride.

5. The paste formulation according to claim 4, wherein the viscosity modifier is PEG 200, PEG 300, PEG 400, PEG 600, monoethanolamine, triethanolamine, glycerol, propylene glycol, polyoxyethylene sorbiton monoleate, or poloxamers; the absorbent is magnesium carbonate, calcium carbonate, starch, or cellulose and its derivatives; and the colorant is titanium dioxide, dye or lake.

6. The paste formulation according to claim 1, which, based upon total weight of composition, comprises:

(a) about 0.01 to about 50% of a therapeutic agent;

(b) about 0.02 to about 20% fumed silica;

(c) about 0.01% to about 20% of a viscosity modifier;

(d) 0% to about 30% of an absorbent;

(e) 0% to about 20% of a colorant; and

(f) Q.S. a carrier.

7. The paste formulation according to claim 4, based upon total weight of the composition, comprises:

- (a) about 0.01 to about 50% of a therapeutic agent;
- (b) about 1% to about 6.5% fumed silica;
- (c) about 0.05% to about 5% of a viscosity modifier;
- (d) about 1% to about 10% of an absorbent;
- (e) 0.01% to about 10% of a colorant; and
- (f) Q.S. a carrier.

8. The paste formulation according to claim 4, wherein the therapeutic agent is an avermectin or a milbemycin.

9. The paste formulation according to claim 8, wherein the avermectin or milbemycin is ivermectin, praziquantel, abamectin, ememectin, eprinomectin, doramectin, moxidectin, or selamectin.

10. The paste formulation according to claim 5, wherein the therapeutic agent is praziquantel or selamectin.

11. The paste formulation according to claim 5, wherein the therapeutic agent is a COX-2 inhibitor.

12. The paste formulation according to claim 11, wherein the COX-2 inhibitor is 3-(cyclopropylmethoxy)-5,5-dimethyl-4-(4-methylsulfonyl)phenyl)-5H-furan-2-one or 3-(cyclopropylethoxy)-5,5-dimethyl-4-(4-methylsulfonyl)phenyl)-5H-furan-2-one or pharmaceutically acceptable salts or hydrates of these compounds.

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13. The paste formulation according to claim 12, wherein the COX-2 inhibitor is the polymorphic B form of 3-(cyclopropylmethoxy)-4-[4-(methylsulfonyl)phenyl-5,5-dimethyl]-5H-furan-2-one.

14. The paste formulation according to claim 5, wherein the therapeutic agent is a substituted pyridylmethyl derivative or a phenylpyrazole.

15. The paste formulation according to claim 14, wherein the therapeutic agent is imidacloprid or fipronil.

16. The paste formulation according to claim 3, wherein the therapeutic agent NSAID.

17. The paste formulation according to claim 16, wherein the therapeutic agent is carprofen, flunixin, ketoprofen, meloxicam, naproxen or phenylbutazone.

18. The paste formulation according to claim 5, wherein the therapeutic agent is a proton pump inhibitor.

19. The paste formulation according to claim 18, wherein the proton pump inhibitor is omeprazole or a salt thereof.

20. The paste formulation according to claim 5, wherein the therapeutic agent is an estrogen, a progestin, or an androgen.

21. The paste formulation according to claim 1, wherein the therapeutic agent is an insect growth regulator.

22. The paste formulation according to claim 4, which, based upon total weight of the composition, comprises:

- (a) 2.5% of a therapeutic agent;
- (b) 4.0 % fumed silica;

- (c) 1.0% monoethanolamine;
- (d) 1.0% titanium dioxide;
- (e) 50.0% triacetin;
- (f) 41.5% propylene glycolcaprylic-capric diester 840.

23. The paste formulation according to claim 4, which, based upon total weight of the composition, comprises:

- (a) 0.82% of a therapeutic agent;
- (b) 4.25% fumed silica;
- (c) 2.0% magnesium carbonate;
- (d) 0.20% titanium dioxide;
- (e) 0.4% polyethylene glycol 300; and
- (f) 92.33% triacetin.

24. The paste formulation according to claim 1, wherein the formulation is for oral administration.

25. The paste formulation according to claim 1, wherein the formulation is for topical, dermal or transdermal administration.

26. The paste formulation according to claim 1, which comprises an antioxidant and the antioxidant is selected from the group consisting of alpha tocopherol, ascorbic acid, ascrobyl palmitate, fumeric acid, malic acid, sodium ascorbate, sodium metobisulfate, n-propyl gallate, BHA, BHT and monothioglycerol.

27. The paste formulation according to claim 1 which comprises a preservative and the preservative and the preservative is selected from the group consisting of the parabens, benzalkonium chloride, benzethonium chloride, benzoic acid, benzyl alcohol, bronopol,

cetrimide, chlorhexidine, chlorobutanol, chlorocresol, cresol, imidurea, phenol, phenoxyethanol, phenylethyl alcohol, phenylmercuric acetate, phenylmercuric borate, phenylmercuric nitrate, potassium sorbate, sodium benzoate, sodium propionate, sorbic acid, and thimerosal.

28. A method for treating inflammation, pain, or fever which comprises administering of administering an effective amount of a paste formulation according to claim 16 to a host in need thereof.

29. The method according to claim 28, wherein the host is a horse, cattle, pig or human.

30. A method for treating inflammation, pain or fever, rheumatoid arthritis or osteoarthritis which comprises administering an effective amount of a paste formulation according to 11, to a host in need thereof.

31. The method according to claim 30, wherein the host is a horse, cattle, pig or human.

32. A method for treating or preventing insect infestation which comprises administering an effective amount of a paste formulation according to claim 14 to a host in need thereof .

33. The method according to claim 32, wherein the insects are fleas.

34. A method for treating or preventing parasitic infestations in a host in need thereof, which comprises administering a paste formulation according to claim 8 to a host in need thereof.

35. The method according to claim 34, wherein the host is a horse, cattle, pig or human.

36. A method for regulating fertility in a host in need thereof, which comprises administering a paste formulation according to claim 20 to said host.

37. The method according to claim 36, wherein the host is a horse, cattle, pig or human.

38. A method for killing insects which comprises applying to said insects or an environment they reside, an effective amount of a compound according to claim 21.

39. A method for inhibiting acid secretion in the stomach of a host in need thereof which comprises administering to said host an effective amount of a paste according to claim 18.

40. A method for preventing or treating a bacterial infection of a host in need thereof which comprises administering to said host an effective amount of paste according to claim 18.

41. The paste formulation according to claim 3 wherein the therapeutic agent is an antibiotic.

42. The paste formulation according to claim 41, wherein the antibiotic is 8a-azalide, azithromycin or erythromycin.

43. A method of treating bacterial infection in a host in need thereof which comprises administering to said host an effective amount of a compound according to claim 42.

44. A process for preparing a paste formulation according to claim 1, comprising the steps of:

(a) dissolving or dispensing the therapeutic agent into the carrier by mixing;

(b) adding the fumed silica to the hydrophobic carrier containing the dissolved therapeutic agent and mixing until the silica is dispersed in the carrier;

(c) allowing the intermediate formed in (b) to settle for a time sufficient in order to allow the air entrapped during step (b) to escape; and

(d) adding the viscosity modifier to the intermediate with mixing to produce a uniform paste.

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